

HOW TO KEEP "FIT"
OR THE
SOLDIERS' GUIDE TO HEALTH
IN
WAR AND PEACE.

Copy of Letter received from the late Field-Marshal Lord ROBERTS, V.C., Etc.

Writing from

ENGLEMERE.

Ascot, Berks,

February, 1909.

The late Lord Roberts said :—

I am glad to hear that a new edition is in preparation, for I am quite sure that it is a most useful guide, and cannot fail to be of service to the Army.

Lieut.-General Sir R. S. S. BADEN-POWELL, K.C.V.O., K.C.B., in a letter to the author of this little book consenting to its being dedicated to him, says: "I think a good deal of sickness among the men might be avoided had they clear and simple instructions as to how to keep themselves in health."

TIPS FOR THE FRONT.

GALE & POLDEN'S MILITARY SERIES

TIPS FOR THE FRONT

What to DO and What to
AVOID on Active Service

BY
" ROUSILLON "

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INTRODUCTION.

With a new army, so many members of which are new to soldiering, it is most desirable that the experience of older soldiers shall be placed at their disposal. For this reason I have been asked to give advice on those subjects which will individually interest those going to the front; help to make conditions there as comfortable as possible, and add in some degree to their safety. No amount of experience, or advice, will prevent casualties on active service, and, to be successful, risks must be taken by all. My advice is therefore not going to be that of inculcating the principles of timidity, but to assist to keep the soldier in safety so far as preventive measures will

help to that end without interfering with his duty. Owing to the excellence of our medical service the amount of preventive sickness at the front has been extraordinarily small. In past campaigns the number of deaths from disease always exceeded the number killed by the enemy. In the South African War, for example, we lost 6,965 soldiers from wounds, to 13,590 from disease! Therefore it becomes the duty of all soldiers to take every precaution to prevent disease, and to assist the Medical Officers to wage a successful war against this insidious enemy. Not being a medical man I have not dealt scientifically with medical subjects, but have given advice which everyone entering upon the strange conditions of active service should know. One thing is certain on active service, and that is that disease will come if precautions are not taken. Armed with this knowledge, and

knowing the necessary precautions to prevent disease, a soldier's chance of "coming through" the campaign in safety is greatly increased. There are many hundred parts of one's body which can be hit by bullets without causing anything but a temporary discomfort; but enteric or dysentery is a wound to the *whole* body; and one which is apt to leave serious damage behind *if one recovers*. If I dwell on the medical portion at length it is because experience has taught me that hygiene, in other words the preservation of health, is the best study for anyone contemplating active service, and that disease is the greatest danger one has to fear. In addition I have dealt with certain things which make for comfort to oneself, and discomfort to your enemy. To those erstwhile engaged in peaceful pursuits, a state of War, and the arrival at the scene of operations, is a curious

experience: to those many who have always been taught to "play the game," it becomes a difficult task to remember that *War is not a game*, and that cunning and the taking advantage of the mistakes of one's enemy are essential conditions for success. Except for a few humane principles, which were agreed upon by all European nations at the Geneva Convention (such as the respect to be shown to the Red Cross, etc.), there are no rules of war. To the German soldier "War is War," and anything which can further its success is adopted, without question as to whether fair or unfair, right or wrong: in addition, they are a well-disciplined, brave nation; trained to war by officers who have made this campaign a life-long study, and filled with a love for their Fatherland possessed by no other nation. Consequently it is wrong to suppose that an act of humane chivalry will be

respected, should it offer a tactical advantage to the enemy. To the British soldier, almost invariably a "sportsman," it is extremely difficult not to be fearless and chivalrous to a dangerous degree; neither can he take kindly to cunning and pretence, so foreign to his nature, but so requisite against an enemy using every wile, and so ready to take instant advantage of any mistake, whether due to chivalry, ignorance or folly. War releases the primary passions of man, and, in the heat of action, it is as futile to ask an enemy to play according to fixed rules, as to expect a tiger to kill its prey according to a definite time-table. Therefore cunning must be met by cunning, and sentimentality must not be permitted to outweigh common sense. It is impossible to associate the British soldier with any foul deed of passion, or hatred, but many of our soldiers have lost their lives in their anxiety

to "play the game" and owing to a generous disregard for cunning plot. Therefore discrimination must be shown before definite action is taken in all cases where a ruse may be concealed under an apparently honest exterior. As far as possible I have endeavoured to deal with all the most important things a soldier should know on embarking for the seat of war. Courage, self-reliance and initiative will carry a man through most things, and in this war the possession of these qualities is an invaluable asset. A famous general once said that he was nervous when first under fire until he saw that his enemy was just as nervous as he was. So, in this war has it been proved that the nearer one gets to the enemy the safer one is. This may sound singular to some, but such close touch means the moral advantage being with the side possessing initiative and resource, and limits artil-

lery action, owing to the fear of shelling the wrong side. I have not indulged in abuse of our enemy, for that is a futile method, usually left to those "arm-chair" tacticians who sit safely at home! Neither have I ventured an opinion as to the length of the Campaign, nor endeavoured to preach teetotalism, or non-smoking, etc. These things I leave to fate and to a soldier's common sense. If these "Hints" prove of service and help to carry our soldiers safely through the Campaign, I shall be amply repaid for any trouble caused by their compilation.

"ROUSILLON."



TIPS FOR THE FRONT.

HINTS ON HEALTH.

First and foremost of all my Hints must come those regarding a soldier's health. The different conditions between ordinary civil life and those of war are enormous, and those who have enjoyed good health under the favourable circumstances of civil life will certainly not do so in war unless they know, and observe, the simple rules of hygiene. Life is precious to everyone, and it stands in far greater danger from disease than from the enemy's bullets. Easy as the simple rules of hygiene are, they prove irksome on active service, the more especially when men are exhausted; but it is that very condition which assists disease, and many a man has

lost his life for the sake of five minutes extra work or self-control; is it worth it? Therefore, hungry or thirsty, tired or wet, avoid the temptation to "chance things," and play the game to your body as you do to your friends. Everyone knows that all disease, enteric, dysentery, malaria, cholera, diphtheria, influenza, etc., are all caused by the entry into the blood of an invading army of microbes. These are different in size and shape, according to the disease they belong to. If the spittle is examined from anyone's mouth it will always be found to contain certain kinds of dangerous germs. These germs are brought there by various causes (i.e., bad water or food, drinking from a cup, or smoking from a pipe which has been used by a disease "carrier," dust, etc.). Disease "carriers" are certain men who may be quite healthy in every

respect, but who are filled with certain kinds of disease germs; they are rare to meet with, but it is wise to always behave as if the cup, pipe, etc., had been previously handled by one (in other words, either avoid or thoroughly clean them first). Our blood contains certain substances which have the power to kill invading germs; if one is in good health these substances are strong enough to prevent their making headway. If a soldier is in poor condition, or when exhausted or otherwise unfit (such a state as is produced by alcoholic excess), these substances lose their strength, and are destroyed by the germs which gain access to the blood. This is, briefly, how disease is started. Once in the blood, and the substance defeated, the germs rapidly multiply, in some cases at such a rate that seventeen millions are produced from one germ in twenty-four hours. Un-

Fortunately, until this multiplication has assumed serious dimensions, no symptoms at all are felt by the sufferer. The interval between the entrance of the germs and the appearance of definite symptoms may be from two days to three weeks. This is why a knowledge of the cause of disease is so necessary to all soldiers; they do a thing one day (i.e., drink from suspicious water, fail to provide a latrine, share a mug with a neighbour, etc.), and feel no ill-effects. This encourages them to disregard all sanitary precautions, *yet the whole of this time they may be suffering from ever-increasing millions of germs from the first indiscretion.* Once the disease appears, whether the patient recovers or not, depends upon whether he was in good condition before, and whether his blood can be reinforced by the protective substances in sufficient quantities to eventually destroy the dis-

ease germs. In a healthy man his immunity from disease is not easily destroyed, and, even if it is, the blood substances producing this immunity usually have the power of recovering from the initial defeat and of ultimately defeating the germs, which defeat brings about the recovery of the patient. This description is sufficient for our purpose: remember then the following points:—

1. We all have disease microbes in our saliva.
2. These are harmless unless we give way to them by excess, abuse, or by neglect of ordinary sanitary precautions.
3. Once they get past our army of resistance they are difficult to defeat, and, in any case, make one very ill.
4. Even if eventually defeated they often leave results behind which remain for life.

5. Active service is the worst time to choose for being ill.

With this knowledge before us we see the absurdity of neglecting any precaution which would protect us from disease. After suffering from enteric, malaria, cholera, and dysentery, all caught on active service or in "big game" shooting in tropical jungles, I would now thirst *for days* rather than drink suspicious water; the discomfort would be great, but nothing to that which would follow if I drank it. Therefore my advice is "be sanitary," and if you cannot be so, owing to circumstances, then be as careful as you can be, and suffer exposure, thirst, or other hardships rather than give way to momentary temptation, behind which danger may lurk. The following are the most important rules to observe:—

Inoculation.—The best preventive of enteric known. In a recent series

of three years' statistics it was found that for every 1,000 men who were inoculated there were 3 cases of enteric; for every 1,000 of the uninoculated there were 32 cases. These figures speak for themselves, and a soldier who neglects to take advantage of this splendid preventive measure is unfit for the society of his fellows, for he actually endangers their lives.

Water.—More disease is spread by impure water than by anything else. It may be crystal-clear in appearance, and yet contain most deadly germs; in fact, in West Africa very clear water is always regarded with suspicion. In many of the Continental farms, etc., cesspits are in close proximity to the water supply (wells, etc.). The latter are liable to pollution by soakage through the soil of the sewage. Unless drinking water can be obtained from the Service filter water-carts the soundest

plan is to boil it. This effectually destroys all germs. The great difficulty on service is to cool the water afterwards; but if it is made into tea before being poured into the water-bottle it matters little whether it is hot or cold. Certainly the absolute safety of such water quite out-weighs all other considerations. Pocket filters are *not* recommended; they give a nastier taste than boiled water, are easily choked up, and, unless thoroughly boiled at frequent intervals, become regular "microbe traps." That is my own experience, unless a better form of portable filter is now on the market. If necessary, however tired, travel a mile for water to get it pure, and, even if suffering from a severe thirst, don't be tempted by a foolish comrade to drink suspicious water. It's a "mug's game," and not worth the risk. After a thirst of nearly 36 hours, during extremely hot weather

in India, I was tempted to drink some water from a doubtful water bottle—and spent the next three months dangerously ill from dysentery. A good soldier requires to train himself to do without much liquid refreshment at all times. Then, when the pinch comes, he can stand it better than those who have never self-disciplined themselves in the same way. Ship-wrecked mariners have spent ten days, and over, in open boats, exposed to a tropical sun, without a drop of water, and have recovered when rescued. Yet the average civilian considers it a terrible thing to be thirsty for a few hours, in our cool and moist climate.

Food.—The Field Service rations are ample, and very good in quality. Therefore little is to be feared from this source, providing the receptacles and cooking arrangements are free from suspicion. Care must, however, be taken with regard to food pur-

chased from small shops. In examining tinned food it should always be noted if the tin is bulged or "blown." Tins with three soldered holes should be regarded as suspicious, as the third indicates that putrefaction has occurred, and is made to allow the gas to escape.

Clothing.—If an Infantry soldier, don't "overclothe." All kinds of waterproof, and leather waistcoats, rain and airproof, under garments, etc., are being sold by men who have no knowledge, and no intention of acquiring the experience, of active service. A soldier's work in the field, where he carries his "world" on his back, is often heating: this heat produces perspiration and, if this is evaporated, no harm results. If, however, interfered with by "waterproof" clothing, harm will probably result. Nature intended man for an open-air life, and one finds on active service that one keeps

warmer and healthier in the same underclothes, etc., as one is accustomed to in ordinary life. Woollen underclothes are undoubtedly the best for active service: they prevent too rapid cooling of the body from excessive external cold, and also cause the evaporation of sweat to take place in an equable manner.

Equipment.—Great care should be taken to balance the pack, a badly balanced pack means constant muscular effort to maintain the equilibrium of the body, and exhaustion. No pack should be more than one-third of the body weight.

Hygiene on the March.—This is a matter of the utmost importance to a soldier. It is the duty of every soldier to observe the following rules, in order to preserve his health:—

1. As much rest as possible should be obtained when “off duty.” Sitting up late at night in billets, walking about long before the hour to

start, etc., are two bad habits which no good soldier should do. (Those who sleep longest go furthest!)

2. A march should not be started on an empty stomach. A cup of tea with a biscuit is quite sufficient to start upon.

3. In hot weather coats should be unbuttoned, collars turned back, etc., to facilitate ventilation, and as open a formation be adopted as circumstances permit.

4. Every encouragement should be given for singing and whistling on a march. Some such mental occupation has a great effect on the spirits of the men, and prevents fatigue.

5. *Footsoreness*.—This is a most important matter to every soldier. Clean feet, well-fitting boots and socks, are essential. On service the feet should be washed at least every day: if facilities are not available, wiping them with a wet cloth does good. Socks when removed should

be stretched, hung up to dry, and put on the opposite feet when again worn. Blisters should be pricked with a clean needle, and tender parts covered with soap. Socks soaked in castor oil, and worn in boots which are hard, will quickly make them comfortable.

6. *Smoking*.—This is not recommended on the march. It increases thirst, and is not good during serious physical effort. Otherwise pipe smoking is to be encouraged ; but not large quantities of cigarettes.

7. *Water*.—A common fault on the march is drinking from water-bottles, and springs, etc., passed. Self-discipline must be practised, as it is an injurious habit. A dry mouth is no indication that the body requires liquid. Water-bottles should be “boiled out” once a week.

8. At halts take off equipment, and lie down. The great general “Stone-wall” Jackson always said “A man

rests all over when he lies down," and attributed much of the efficiency of his troops to making them rest whenever possible.

SANITATION IN CAMPS OR BILLETS.

In billeting it naturally follows that houses are occupied by a far larger number of men than they were built to accommodate. Therefore the strictest attention should be paid to the following:—

1. Well ventilate all occupied rooms (*i.e.*, sleep with windows wide open, etc.).
2. Be careful regarding the water supply.
3. Provide additional sanitary arrangements (latrines, washing places, etc.) outdoors.
4. Allow no kitchen garbage, tins, rags, etc., to be littered about; they should be collected and burnt, or buried.

5. Keep the surroundings as clean as possible: for all you know you may occupy the locality for weeks afterwards. Always make a latrine whenever possible, and cover it up before leaving. (Both the excreta of the body and urine are disease carriers, and when dry these germs are blown about in dust and so convey disease.)

Remember, even if you do not remain in the locality, that it will be occupied by the comrades supporting you.

PERSONAL HYGIENE.

Teeth.—The teeth should be in sound condition, and decayed ones should be extracted, or stopped, before embarking. They should be carefully brushed whenever possible with some form of antiseptic powder.

Medicine.—Little in the way of medicines can be carried, or is recommended. Aperient medicine can

always be obtained and a bottle of chlorodyne, some quinine tabloids, and some vaseline supply all ordinary needs. A small bandage or two, and some sticking plaster are useful additions. For the rest, remember, you will seldom be far from the most perfect medical service which has ever taken the field.

Lice.—A nasty subject, but one of striking interest in the field, is the defeat of ground lice. These generally manage to get into the clothing of most soldiers unless they have opportunities for frequent changes. Since the South African War they are better understood, and the application of benzol, or petrol, to the garments, more especially the seams of underclothing, destroys this unwelcome guest.

Personal Cleanliness.—Bathe whenever possible, and keep the skin clean by hand-friction and wiping with a wet cloth, when a bath is not pos-

sible. This will keep the pores free from dirt, and help to keep one in health.

To generally sum up it is obvious that active service must present sanitary problems not encountered under peace conditions. It is equally as obvious that disease can only be prevented by each individual soldier doing his share towards making conditions as sanitary as possible. Active service tests a man's physical fitness more than any other condition: therefore all soldiers who hope to see the campaign, and to survive it, should, both during their training for, and when in, the field, do nothing to decrease their powers of resistance and everything to make them immune and free from disease.

In civil life many men over-smoke and otherwise over-indulge without feeling much the worse for it: in an active military life its effects quickly become apparent. When fighting a

strong, healthy, virile type of man, such as the German soldier undoubtedly is, we should do all in our power to keep ourselves fit. If we do the war will not last long, and surely such a small self-sacrifice is worth making? Therefore smoke and drink if you will ; but do neither to excess, and commence to do without things which you will not get on active service. Moderation in all things is essential for a soldier's success.

HINTS ON COVER.

The knowledge of how to take cover is most valuable to a soldier. At the same time he must know the following, in order to take full advantage of what cover may exist:—

1. What thickness of different materials is required to stop a shrapnel or rifle bullet.
2. What cover will be seen, or concealed, from the enemy's position.

3. That, whether cover from view alone, or cover from both view and fire, it *must* permit of easy exit and the free use of the rifle.

Cover from view alone means that cover which conceals the presence of troops, without sheltering them from fire.

To take cover in a trench, hole, house, or anywhere from which a soldier cannot see to fire at his enemy, is a most dangerous thing to do. Like the fate of the proverbial foolish ostrich, which buries its head in the sand and thinks it is not seen, it usually brings a rude awakening. Apart from the danger of such a procedure, nothing gives an enemy more confidence than to be faced by soldiers "sitting tight" in cover, and not able to harm him. Therefore avoid such cover!

The following thicknesses of material should be remembered. The penetration of a modern rifle bullet,

fired at “ point-blank ” range, is first given, and then, in brackets, the thickness which will usually suffice for hasty field work : Earth 40 inches (36 inches), sand 30 inches (25 inches), brick 9 inches (9 inches), hardwood tree 38 inches (30 inches), softwood tree 58 inches (45 inches), turf 80 inches (60 inches), iron plate $\frac{3}{4}$ inch, shingle between boards 6 inches (4 inches). Excellent cover can be extemporised from any of the above and from the following :—Railway lines or sleepers, galvanised iron sheeting (placed in double rows, and filled with shingle, sand, etc.), sand-bags, kerbstones, bundles of moss litter, etc., etc. It will be recognised that cover, to be effective, must possess the above thicknesses *at the top*. In South Africa many men were hit through non-observance of this obvious requirement. Cover we see consists of cover from view, or sight; only, cover from fire only, and cover

from view and fire combined. The first is better than nothing, if it does not form a target for an enemy's artillery; the second is useful if not under artillery fire; but the third is obviously the most valuable and desirable. The danger of cover from sight alone is that the enemy may be watching men entering it and remaining there; in a few minutes this locality would be heavily shelled. Therefore the approach to cover from view alone must be concealed, or the stay there be of the briefest duration. With modern artillery it is generally safer to remain in the open, on exposed ground, than to take cover in any obvious cover-from-view localities. (In the present war a battalion was exposed, on open ground, to heavy artillery fire the whole day, and only suffered very few casualties.) Cover from fire and view is most desirable, but seldom obtained without entrenching and other preparations. Sometimes a sunken road,

a railway embankment, etc., will afford this cover; but the modern high-explosive shrapnel requires a deep, narrow trench to escape from its attentions. A parapet is therefore not sufficient, and the pick and shovel must improve existing cover. Every soldier carries an entrenching tool; this is most useful, if properly used, and has been instrumental in saving hundreds of lives. When cover has to be obtained lying down, by its aid, commence to dig a trench about 3 feet long and 2 wide, throwing all the earth well to the front and left face. Dig down to 2 feet depth, then get into trench and improve as necessary (i.e., widen, deepen, lengthen, etc.). Finally cut out a deep recess at back of trench for the feet to go into when firing kneeling. When finished, flatten down parapet to 18 inches from ground level, and fire round right side of same.

Pattern as follows:—

FIG. I. Pattern of Trench for Kneeling
made with Entrenching Implement.

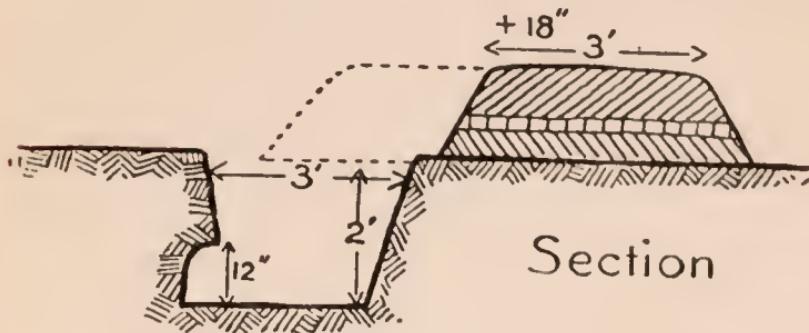
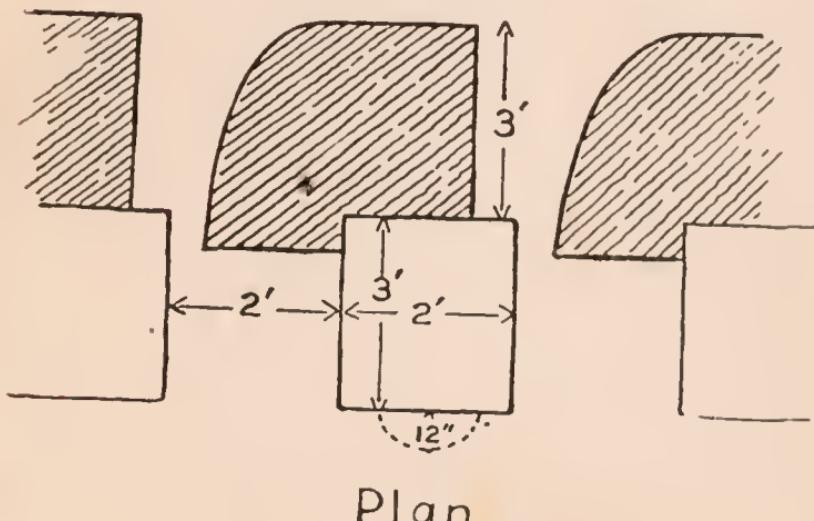


FIG. 2.



As the officer who was selected to carry out the Indian experiments, prior to our adopting a pattern entrenching tool, I know its capabilities, and agree with those who consider it ranks in importance as second only to the rifle. Unfortunately its value is only fully appreciated when on active service, and sufficient training is not obtained beforehand. Like everything else, previous practice is required to become expert in its use. A well-trained soldier can get complete cover by its aid in 25 minutes; better than another can get, without practice, in an hour. Therefore, think of how to use it, and get some practice beforehand. The correct procedure for the use of this tool is as follows:—

1. "Spitlock," or outline, on ground, shape of trench, being careful to see that its *head* end will permit fire to be delivered at enemy.

2. Lie down at bottom left corner, placing rifle on left side, and commence picking with *shovel* end of implement. (The pick end is only intended for very hard ground, and does less work.)

3. When sufficient earth is loosened use spade as a trowel, and throw earth to beyond point where head will be.

Note.—Chief points to observe in using this implement are:—

- (1) Loosen lots of earth before shovelling.
- (2) Never attempt to scoop up hard earth, but first break it up.
- (3) Hold haft at very end, and let the weight of the tool do the work. Bend the wrist, and let pick end almost touch upper arm each time when breaking up ground; not short, feeble strokes.

4. When sufficient has been dug, roll into pit, and flatten out parapet to 3 feet. As you fire from right side, make parapet to cover the left corner of trench, as well as front. In all other respects the taking of cover is purely a matter of common-sense. Assuming you know what gives cover, what cover is conspicuous to an enemy and will obviously be searched by his artillery fire, and how to make the best use of what exists, then there is nothing more to be taught. Soldiers who crowd together, whether in cover or not, and those who are satisfied to remain behind small trees, or parapets of less than 3 feet thickness, must expect to suffer for their foolishness. Above all, remember, whatever the nature or excellence of the cover, that the purely defensive can never win a fight. The closer you get to an enemy, and the quicker and more daring you are, the greater your

chance of ultimate victory. Cover, therefore, must only be regarded as a means to an end, and must be vacated as soon as possible for another forward position. Soldiers who rest content with remaining behind good cover when it is possible to advance are as useless as if they had never enlisted.

This is a disadvantage of cover; it is often more dangerous, in reality, than the open, and it is apt, with any but well-trained troops, to check an advance. The slower the advance, the stronger the enemy becomes, because he has time to obtain reinforcements. Therefore, use cover if necessary, select it carefully, and leave it as quickly as possible if you want to win. You don't go to war to sit in safety, but to get at the enemy with the bayonet.

HINTS FOR TRENCH WARFARE.

The war has already passed through two phases:—(1) Tactical field opera-

tions on a gigantic scale; (2) Winter trench warfare. With the spring comes a third phase, which will probably be a curious mixture of both; but with entirely different conditions to either of the others. Therefore the lessons taught by (1) and (2) must be studied in conjunction with the approaching season, to obtain the greatest benefit. Winter trench warfare meant comparatively little marching, and permitted of the wearing of countless garments, etc., which would produce heat apoplexy if adopted for a more active part of the campaign. Therefore we must try and imagine what hints will be of use to the soldier for the approaching change. Every soldier will have read letters, etc., from the front, and will know the difficulties of life in the trenches. Let us hope that the remaining portion of the campaign will be of a more progressive and active nature than that

offered by trench life. In any case, dry and warm weather will make the latter far more agreeable, and remove many of its greatest difficulties.

So many excellent official "hints" have been sent home from the front that little remains to be taught regarding life in the trenches. A soldier carries certain things, prescribed by regulations, and is unable, neither is it necessary, to add much to this list. He is taught how to dig trenches, etc., and, when he arrives in them for a tour of duty, can spend his time in making himself as safe and as comfortable as circumstances permit. Therefore little in the way of "hints" is required, for the remainder is commonsense—as, indeed, is most of soldiering. The following may be of some assistance:—

Fires.—It is usually impossible to make a fire, or have a light, which

shines brightly, or gives off apparent smoke; when in close proximity to the enemy's trenches this forms a target for bombs. A canteen of water can be boiled over the flame of a candle cut in three pieces, or by that given from a piece of rag stuck into a tin of vaseline. During training it might be as well to study these methods, and practise cooking.

Cooking.—When rations are issued raw, a stew is generally the best form to prepare one's rations. Meat cut up small, with potatoes, etc., and stewed in a mess tin half full of water, can be made most palatable.

Rifle.—A soldier's best friend on service is his rifle. In trench warfare this is very liable to get clogged with dirt, and cases have occurred where this has rendered a rifle quite useless at a critical moment. Always see that it is well oiled and thoroughly clean. A footless sock, or

mittens, pulled over the bolt action, which protection must be capable of being instantly removed, will help to keep this clean. To prevent dirt getting into rifle keep your cartridges as clean as possible.

Curiosity.—Except when “observing,” or ordered to fire, a soldier should expose himself as little as possible, and not present favourable targets to the enemy’s snipers. With a good trench periscope this difficulty is removed, and many are now provided for observing purposes. Idle curiosity often provides the enemy’s snipers with an opportunity.

Searchlights.—When “lit up” by searchlight, or star shell, etc., in the open, lie flat, keep quite still, and keep face well down.

Wire Cutting.—When cutting wire, if not observed by the enemy, cut close to a post, and hold end to prevent its flying back and creating a noise. When cut, wrap long end round adjoining post.

Sleeping Helmets.—If wearing sleeping helmet, etc., at night, be careful not to cover up ears. Much depends on a sentry being able to hear at night; in fact, hearing is of even greater importance than seeing on dark nights.

Obstacles.—Never depend upon obstacles alone to stop a rush. Effective listening, and effective fire, is required in addition, if the effort is serious, no matter how complicated and strong your obstacles may be.

Wounds.—If wounded keep wound as clean as possible, and endeavour to avoid mud, or earth, getting into same. Get “first aid” dressing put on, and keep quiet until attended to by the Medical Officer.

Trench.—If the trench has only recently been made, set to work directly you enter to improve it, in the following order of importance:—

1. Take steps to make it as strong as possible (i.e., deepen, and provide

effective parapet, and bank up rear side. When dark improvise, or improve, obstacles in front. Make extra communicating trenches, etc.).

2. When (1) is finished improve drainage, make latrine, dressing station, dug-out for oiling and cleaning rifles, dig "Funk Holes," or shelter pits; revet walls if necessary; prop up ceilings of pits with planks and beams, etc.

3. If both (1) and (2) are done make general improvements, such as getting straw for "Funk Holes," making plank walls, etc. There is always something to be done to improve the strength or comfort of a trench.

RUSES IN THE FIELD.

War is made up of deception, and, whether major or minor tactics, both sides endeavour to hoodwink the other. Ruses to be successful must be carefully thought out and well

executed to deceive an enemy who, naturally, expects such an attempt. The more original and unique, providing they do not transgress certain military principles, which must be observed, the better, and the more likely they are to succeed. It will be obvious that, in a book of this size, I cannot give many examples of ruses; but the following will serve as successful examples of the past:—

My first example goes right back to 1066, when William the Conqueror landed and fought the Battle of Hastings. He was opposed to a brave and powerful English army, which held a strong position. After fighting for a considerable time William realised he could not hope to defeat his enemy so long as they held this position. He therefore had recourse to a ruse by pretending to retire. This deceived the English, who flushed with success, left their position to pursue. When drawn into a

position favourable to the Normans, the latter counter-attacked and defeated the English. This form of a ruse has often been adopted since this battle, and is frequently met with in minor tactics.

Another ruse, and one of great value in the South African War was for scouts, patrols, etc., when approaching suspicious localities, which might contain the enemy, to pretend to see them, halt, occupy positions, and send back messengers, etc. If really occupied this seldom failed to make the enemy disclose himself by fire, and so "give away" his position.

In trench warfare many forms of ruses exist, which help to deceive an enemy. Dummy trenches, and guns made out of hand-carts and tree stumps, give a totally wrong impression to an enemy's aircraft; rapid fire and a few men rapidly changing positions and appearing at different spots each time, gives an impression of a

trench being held in greater strength than it actually is. In the open signals, etc., given to imaginary troops in rear, to lie down, advance, etc., often mislead an enemy unable to see into the position these imaginary troops are supposed to occupy: A pretended retirement from a fire position, only to re-appear as the enemy reaches it (after all a direct form of the 1066 ruse!): Puffs of smoke in localities remote from any gun, after the latter has fired, to create the impression that the smoke indicates the presence of the gun: Giving words of command, "Retire!" "Move to the right," "This way, 'D' Company," etc., in the enemy's language at night-time; or using his whistle, or bugle calls by day: Lighting numerous small fires to create the impression that a bivouac contains a large number of men.: Presumably bivouacking for the night in one spot, and moving to another after dark: Allow-

ing false information letters, orders, etc., to fall into an enemy's hands, and so mislead him. All these are ruses which have proved useful in this, and in other campaigns. In fact anything which will deceive the enemy; and which will be to his disadvantage should be made use of. In fact ruses are only limited by the originality, daring and resource of the individuals concerned, governed by the ordinary military principles which must always be observed. Always suspect any move of your enemy and never relax a single precaution in his country. Be on your guard and on the watch constantly. It must always be remembered that the Germans possess many excellent linguists, who are able to speak English almost as well as an Englishman.

HINTS ON ARTILLERY FIRE.

Artillery may be considered to be of two main kinds: Heavy and Light. The former consists of guns of various patterns, difficult to transport by road, some, the more powerful, requiring special platforms to fire from, and all capable of firing shells varying from the large to the enormous. Contrary to the German expectation the latter, which they relied upon for a shattering moral effect, have done little else but excite the derision of our soldiers, and to provide them with holes for cover in advances from the trenches. True, their power for damage is great, but their immense weight carries them well below ground if they fail to explode in the air, and their effect is extremely local. A trench is a very thin line to hit by a gun firing three to five miles away; in fact as difficult to hit as a piece of cotton with a pea at 50 yards. Rejoicing in the names

of "Black Marias," "Jack Johnsons," etc., the larger shells rarely do really serious damage to field fortifications. Even if they did it would be almost impossible to make suitable cover to keep them out; so that one need not worry over that question. The splinters, etc., from the heaviest shell are almost equally well kept out by the precautions taken to prevent damage by shells from field artillery. It is with the latter that infantry has a more frequent speaking acquaintance. To obtain a proper realisation of what artillery fire means, a soldier must first know something of its nature. A field gun fires a shell varying in weight from 13 to 18 lbs.; these shells are hollow steel cylinders filled with small bullets, with a small charge of powder in the centre, or at the end. At the nose of a shell is a time-fuse, which is adjusted by the gunner immediately before it is fired.

The procedure prior to this firing is as follows:—We will imagine the artillery see a number of men taking cover in a small patch of gorse; the range-taker ascertains this to be 3,500 yards away: the length of time a shell will require to travel this distance is known, and is given, together with the target, to the gunner; the latter adjusts the time-fuse to the time required, in seconds, and fires the shell. Supposing the sighting and range to be correct, this shell should burst about 20 feet above ground, and some yards before reaching the gorse. The time-fuse ignites the powder, and the latter, bursting the shell, releases the bullets, which travel forward in an ever-increasing cone, searching the gorse. Some shells are made to burst downwards, and some of the German shells also burst backwards. It is unnecessary to add that this description is of an ideal target seldom given to a

gunner. The bullets from a shrapnel shell soon lose their effect, and have not nearly the penetrative power of the rifle bullet. It has taken many shells to hit a man in this war, even although the Germans placed an enormous amount of artillery in the field, and wasted shells most lavishly on every position capable of providing cover. Now that we have the preponderance of artillery, and their shells, gunners and guns are of an inferior quality to those of the early days of the war, we can have every hope that their artillery fire will do even less damage. I do not wish to create the impression that artillery fire is harmless! Against definite targets, such as houses, bridges, etc., it can have immense effect, but against soldiers scattered on a country-side, or in narrow, well-concealed trenches, artillery success is usually a matter of luck. To the British soldier, ever a sportsman, this risk is only stimu-

lating. Artillery fire is far more noisy than dangerous, and once this is recognised soldiers take little notice of it. With our superior artillery that of the enemy is compelled to occupy positions from many of which "indirect" fire can alone be delivered. This means that the gunner cannot see his target, but has to depend upon an "observer" for his aim. Therefore *moving* targets are still more difficult to hit, and only prominent stationary ones will be accurately shelled during an advance. The following hints will prove of use regarding artillery fire:—

1. Don't think that weird, crashing and shrieking shell fire means danger. It often means the reverse (i.e., that shells are bursting short, or over). The bark is worse than the bite!

2. If under shell fire in the open, get well apart, and, if stationary, lie down; if in the trenches, and not

wanted for observing or other duties, remain under cover as much as possible, and don't let curiosity run you into danger.

3. A narrow trench with a good bank of earth in rear, and the trench well traversed and recessed, considerably limits the effectiveness of shell fire, even if some shells do pitch in trenches.

4. Always avoid, if possible, obvious "ranging marks" for an enemy's artillery, such as small plantations, houses, roads, embankments, gaps in hedges, gateways, hillocks, etc., etc. The best cover is usually slight undulations in the ground, high grass, or crops, ditches, etc.

5. If attacking, keep moving forward; in addition to being a more difficult target, the closer to the enemy's infantry you get, the safer you are from his artillery fire (for he will be afraid of hitting his own men). It is *this* which has resulted

in opposing lines getting to such close quarters in this trench warfare.

6. If a shell falls near, and fails to burst, examine its time-fuse; this gives you the exact range of the gun which fired it, and this information is most valuable to your own artillery, but only if you can give the direction of the gun and where the shell dropped, and, if possible, the probable position of the enemy's observing station.

7. If behind cover, under shell fire, tuck as much of the body under that cover as possible; in other words, don't assume the correct "lying position," with legs exposed to shrapnel fire, if you can get them under cover and still use your rifle. At the risk of repetition, always remember that the ability to do the last is essential to safety.

General useful tips:—

Rifle Loading.—Get used to rapid loading both by day and night.

Rapid and accurate fire cannot be too greatly insisted on.

Frostbite.—Much of the so-called frostbite has really been due to over-tight putties, and boots. Putties and boots should never be tight. Greasing the feet is also a preventive.

Bivouacking.—When sleeping out dig a small hole for the hip to rest in. Share your blankets and water-proof sheet with another; this enables you to be warmer, and have more protection from the weather.

Absence.—Remember that absence on active service is a most serious crime, and don't get into unpunctual or slack habits when training.

Equipment.—The only extra additions I would recommend for the soldier are the following:—Small compass watch, note book and pencil, field glasses. Although not essential, all these will be found useful.

Remember this war has proved that Infantry remains the Queen of Arms ; it alone can gain decisive results ; and its weapons are those which ultimately decide the issue of all battles. The Artillery and Engineers help it to get forward ; the Flying Corps and Cavalry assist it with information ; the Army Service Corps feeds it, etc., but the Infantry bears the whole brunt of the final hand-to-hand struggle, and has the supreme place of honour at every battle. Other arms may look more romantic and dashing in peace soldiering, and the Infantry soldier may often envy those of the Cavalry and Artillery, who know not the fatigue of carrying a heavy kit on long dusty marches : some may even wish they had chosen other units, when, weary with long marches and sleepless nights, they are asked to make a desperate attack. Yet ever the slow-moving, unromantic, stub-

born British Infantry has always won the pride of place in every campaign of the past; and yet never has it proved its value better or more gallantly than in the present war.
Surely, when all the other Corps have been left behind in comparative safety, and the Infantry alone confronts the enemy, there cannot be a single one of its members who would exchange his title of "infantryman" for that of any of his less fortunate comrades? Even the poorest-spirited man, on these occasions, must feel he bears upon his shoulders the power to win, or lose the battle; and remembers that "those behind" are dependent for their safety on his skill.

Whatever the Infantry lack in the way of "fine feathers," this should be remembered by all: War is the deciding factor of a Corps' value and this severe test our Infantry has always passed triumphantly. No-

thing I have said must be taken in the slightest degree as derogatory to other branches of the service: all are necessary to the Infantry success, and without their aid the latter could do nothing. At the same time there is a danger, in an entirely new Army, of the Infantry soldier thinking himself inferior to the mounted corps: This is most decidedly not the case, and never has been since the exit of the days when men fought in armour and with swords, lances and axes. Even then the Infantryman was invaluable—it was an arrow from an Infantryman which blinded King Harold in 1066, and so prevented his countering the ruse of his enemy! Aircraft, big guns and night operations have combined to make close-quarter fighting the rule rather than the exception. This is one of the lessons of this War. Consequently the Hints I have given should prove of use to soldiers of all Corps.

A FEW FINAL WORDS OF ADVICE.

My endeavour has been to help the young soldier by giving him a few hints on things he will meet with on active service. There are many other things he should know, but these will be taught him by his officers, and I have dealt with those above which may not be included in his syllabus of training. Good common sense and a working knowledge of hygiene, penetration of projectiles, methods of the enemy, etc., is all that is required by a soldier in the field. He can then enter it with the knowledge that he is better trained, a better shot, better clothed, equipped, fed, and led than his enemy; also that the comrades who preceded him have met, checked, and defeated bodies of the enemy ten times their own number.

War cannot be safe, neither can we all expect to return from it, but it is something to know that our cause is the justest ever fought, and that the more vigorous the attack, the more we observe the conditions to keep ourselves in health and the quicker we can fit ourselves for the front, the more certain of an early victory we can be. And when peace comes how humiliating for the cowardly "slacker" who has deserted his country in her hour of need, and is doomed to a lifetime of contempt from those who answered the call, and risked the dangers to save England, and all contained in that name.

Finis.